GLEANINGS IN BEE CULTURE

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,

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American Bee Journal. *Clarke.*

Bee Keeper's Magazine. *King.*

National Bee Journal. *Mrs. Tupper.*

[*Also Bound Volumes of the former since* 1860, *and Files of all other Bee Journals that have been Published in America.*]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Ohio Farmer,

Scientific American.

"Novice's Wind-Mill Print," Medina, Ohio.

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KIND FRIENDS:—'Tis our intention to use the inside of the cover for advertisements *when we get 'em*. Until we do, we'll try and gossip a little with our readers on some topic of so little value that 'twill not be worth while to preserve it when you strip off the covers preparatory to binding.

EXTRACTORS seem to be one of the principal topics of the day, and we get many letters like the following:

Unfortunately like many others, I have not more than two hives alike and consequently the frames are all different sizes; two hives, frames 15 inches wide and 12 deep; 1, 15½ wide, 13¼ deep; 1, 16 wide, and 14 deep; two 10 wide, and 11 deep; now what I want especially to know is, if with an Ext. for the L. frame you can extract the honey from all my frames mentioned above, or whether you can only use one sized frame, if so it would not be worth while to get an extractor till I get all my bees on frames of uniform dimensions, which I mean to do as soon as possible. Also, I want to know if you sell the Metal Corners for the top of the frames without the bottom corners, or otherwise.

The GLEANINGS come most punctually, always ahead of every thing else, but never too soon.

How can you tell at this season if a colony is Queenless?

Excuse this hurried communication.

Yours truly, JOHN MCMURDO,

Stromness, Ontario, March 13th, 1874.

We can make Ext'rs, and do at the same price, that will take in any sized frame, but the owner is then obliged to expend considerable strength and time uselessly.

For instance a very large, strong frame must be made to extract one of the Quinby combs, and we are obliged to work slower on account of the extra weight of every thing; yet as there are only eight combs in the hive, we can get along about as fast after all. Again a very light small frame will answer for the Gallup combs, and we can handle them so quickly that we get along nearly as fast if there are *twelve* combs to be handled instead of eight.

So far, so well, but suppose we should undertake to use a Quinby Ext'r for a Gallup comb? do you not see the inconsistency? Now our friend mentions a comb 16 x 14, this is *still* worse, for the Ext'r frames would have to be made at least 14½ inches wide to take this comb in, and perhaps 18 inches long to take in some other one, and to whirl all of this, get it up to speed, start and stop it quickly, for a *small comb*, would be too much like a boy of half a dozen summers trying to run a foot-race with his fathers boots on.

In ordering an Ext'r always give us the size of the comb or combs you wish to use. If you have but few hives of odd sizes you had better cut them down to one sized frame if possible. We always make the Ext'r frame ½ inch wider than the comb, and where the frames are long, the wire cloth may just as well be two inches *shorter* than the comb, allowing the latter to project one inch above and one below, this is perfectly safe and allows the machinery to be made lighter.

We can furnish the top corners alone if desired, at $1.25 per hundred, if sent by mail 25c. additional.

We omitted mentioning them alone, on our price list because 'tis impossible to make a nice light frame without the lower ones also; for such strips as make a substantial frame with the corners, could not possibly be nailed or fastened at the bottom securely, in any other way that we know of. We have purposely kept all mention of the corners out of print, preferring that they should make their own way into general use; this they are now doing at a rate quite satisfactory to us.

We shall try to mail GLEANINGS without fail, early enough so that we may reasonably expect it to be in the hands of our readers promptly, by the first of each month.

ONE letter I have says, "Novice tells how to make one" (extractor) "but they are like his dollar hives, it takes two to make one, and no frames at that, his extractors are a simple can that sits on the floor, no frame to hold it, or knife to uncap with, in *fact it's too cheap*, good as far as it goes,—it wants *finishing*." There you've got it, so solve our problems.

We like GLEANINGS very much, only don't like advertisements on the *pages* of a book worth binding, and would like an index separate from your circular to bind with it.

Success to the "wind-mill print."

New Orleans, La. JAS. H. YOUNG.

Just exactly. Were we to make a bench for our Ext'r to stand on, that would be just right to allow the molasses gate to stand over the bung hole of a barrel, as it should be, it would be an awkward thing to ship, and most of all, our friends would have to pay more freight or express charges on it, than would pay for making a good *permanent* one just where it is to be used. We always endeavor to consider our customers pockets as well as our own.

As very many of our customers had purchased a knife before we sold Ext'rs, we have thought best to fix the price without knives; of what use more than one knife is, in the Apiary we never could tell. P. G. never uses more than one, although we have dozens of them on hand.

'Tis true our machines might look better if painted, but if they were our patrons would have to pay for it, and we cannot really see

Continued on back cover.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY.

Vol. II. APRIL 1, 1874. No. IV

HOW TO CONDUCT AN APIARY.

No. 4.

AFTER the many hints given last month in regard to tidiness etc., and then to go and cover our own hives up with stable manure may look a little inconsistent; it might well be said of us as of some physicians, that they resemble sign posts, inasmuch as "they point the way for others, but go not." Well, the truth is kind friends, we did not dare advise all to do as we have, until we had well tried the plan, any more than we dared three years ago to advise all to sell their honey at 20c. and winter their bees on syrup at a cost of 8c., yet we should by all means advise the the latter now. 'Tis now March 11th, and we have had some very cold rough weather that has made us many times thankful our bees were even warmer than they would have been in the house; besides, the manure when washed by the rain and dried in the sun is not so very untidy after all. It covers the ground so as to make a clean soft carpet to walk on, while the uncovered clay soil is a most unpleasant foot hold through the combined effects of sun and frost. We shall probably leave much of the covering around the hives until May, for usually many sudden cold changes occur with us, between now and that time.

Strong colonies can probably have a comb put in the middle of the cluster advantageously during this month, but the plan of taking brood from them to build up weak ones, we regard as more of a damage to the strong one, than benefit to the weak, although such a course may be best to save Queens of extra value. When you take a comb out of the centre of the cluster, you often take the best half of the brood, and sometimes nearly all the pollen, and the weak stock may be able to prevent only a small part of the brood from perishing. Get every colony as quickly as possible into a condition of things whereby they will be self sustaining, and to do this we know of nothing equal to the meal feed; and we know of no pleasanter or more enticing work about the apiary than getting them briskly at work on the meal. The heaviest crop of honey we ever had was when we induced them to take in most rye meal in March. We are in some doubt if even natural pollen gives brood-rearing the impetus the flour does. Several patent feeders have been claimed to have the property of inducing the bees to take the meal in the hive, but as we have entirely failed with such contrivances, as have all we have conversed with on the subject, we think they may be safely classed with humbugs and swindles. We have never been able to induce them to take any substitute for pollen even when placed in a comb next the brood; the act of flying out and gathering it on the wing, seems to be absolutely a necessity.

The plan advanced of keeping the bees housed during this month or until flowers are in bloom, it seems to us would be decidedly an error. We think modern Bee Culture demands that we proceed to get the hives full of bees as speedily as possible.

If they can get up a large force to work on apple blossoms they will be prepared to send out an army of young bees when the clover appears. That colonies may catch up and do fairly even when so kept back in brood-rearing is quite probable, but our largest yields have invariably been from those that commenced brood-rearing quite early. In our opinion the crop of clover honey is very much dependant upon the start the bees get during the month of April. Who can report a colony having brood in every comb in the hive during this month?

See your bees often, and please excuse us if we say it "often." Some day when you feel like taking a little rest, take the hives one by one and observe whether each one carries in pollen or meal at a fair rate; if it don't, see what the trouble is. If queenless, give it eggs twice a week from some stronger stock on the plan given on page 90 Dec. No. of Vol. 1, until they can rear a queen of their own. Any good queen can during this month furnish three or four times as many eggs probably, as her bees can care for, therefore if we can remove eggs only, we are not injuring the colony, and are furnishing the weak ones all the help they require.

Colonies with old or unprolific queens, can be treated in the same way. Before you object because this is too much trouble, consider that 'twould be time very well invested indeed if you could induce your weakest stock to do as well as your best. Almost every one has colonies that occasionally give a great result. Now this is too much luck and chance; we should be sufficiently skillful to make our entire Apiary give a great result, perhaps not two or three hundred lbs. to the hive, but half that for instance, from 50 colonies would make a "big stir" in almost any neighborhood.

The best we have ever done was an average of 131 lbs. per hive, from 47 colonies, yet we have had a fair paying crop *every* year; even the past one of 1873, with only a yield of hon-

ey for barely 10 days, gave us average of about 35 lbs. from 57 colonies, which paid for all care, and a comfortable percentage on the amount of capital invested besides.

THE STANDARD HIVE AND FRAME.

STRANGE it is, but scarcely a new thing comes up in bee culture, but that if we examine carefully, we will find somewhere a record of where our old friend Langstroth has been over the same ground before us. Even now we have just called to mind a pleasant correspondence that passed between us just before the time of our mutual friend Wagner's death when Mr. L. was in Washington. The correspondence originated from sending Mr. L. one of our new frames. We were then considering a 12 x 12 frame. We extract from different letters as follows:

Washington, Apr. 4th, 1872.

DEAR FRIEND:—I hope you will try the 12 X 12 but I have years ago tried such frames and do *not* like them—too much cost to make, handle, etc. I think the hive 14 x 14 and 13 deep much better, and shall probably adopt that shape, as the honey emptier and side boxes make it no longer so desirable to have a shallow hive.

April 5th. You will see from my last that I propose to change the dimensions of my frame, perhaps there will not be much to choose between the hive 14 X 14 X 13 and 12 X 12 X 12, but I prefer the first, I much prefer ten frames to 12.

Here comes a reply to some queries of ours in regard to the Simplicity hive which then "filled our head;" also as to confining the bees to a single story and using the Ext. on friend Dean's plan, see page 55, Vol. 1.

If you refer to Fig. (1) P. 20, (my book) you will see that I used an open box. Try some on this new plan, but let me strongly caution you not to go into it largely. You will never like the movable B. B. you will find it an intolerable nuisance, there is not time to go into the reasons, but you will find I am right. Under some circumstances perhaps as much could be emptied from a single, as from a double hive, but it *cuts too close.* Too little room room for brood, we want the bees to get the set of frames pretty well filled with the sealed honey—not safe to go on any other plan, their own first, unless we take about all of the best and replace with sugar syrup, this may pay with present prices.

April 10th.—By carefully calculating the difference between 12 X 12 X 12, and 14 X 14 X 13, I find that *ten* frames of the latter sized hive, will have *nearly* as much comb surface as *thirteen* of the former. Now take into fair account the extra *cost* and *time* of handling, the fact that in poor seasons the more frames, the more the honey is scattered etc., and I feel sure you will *not* adopt the smaller size. I hope that you will make one hive of my new size.

April 23rd.—I know that you and those with you, can not only *bear* plain criticism but *desire* it. Let me remind you how apt we are to let an idea run away with us. When we get a good thing we are almost sure to run some parts of it into the ground; It seems to me that you are in danger of doing this in two things, the one I have just mentioned, and the dispensing with the fixed bottom board. When you have fairly worked it out, summered it and wintered it, I feel very confident that you will come to the conclusion I reached 20 years ago. While you try it in your Apiary, let me advise you not to recommend it to the public, until you have put it to the test in your own Apiary. I think our leading Apiarians should be very chary of recommending what they have not *tested;* often, *suggestions* from such parties, lead to rash adoption of them, and serious injury to non-experts. When I was most largely engaged in experimenting, I found it to be a good plan to give my notions to friends, that together we might work them out. They having no paternal interest in the notions, are more likely perhaps than myself, to see in them only *conceits.* But enough of this, I hope that you will understand what I am aiming at.

L. L. LANGSTROTH,

It seems to us that we have scarcely a reader who can fail to see the rare good sense that shines in every line of the above.

After reading it again, we have the same feeling that we had two years ago; that we were utterly incompetent to advise in regard to a hive that will be best, all things considered, for the coming generation of Bee Keepers. Of one thing we are sure however, and that is, that the plainer and simpler it is, the better. That the Simplicity hive will give equally as good yields of honey as the more complicated and costly hives has been abundantly proven, and were we going to use a two story hive we should most assuredly use a movable bottom board, and precisely the hive we advised last season. In regard to the size of the frame, it seems our friend Langstroth had anticipated as usual, the fact that a different shape might be better when we considered a hive suitable for the Ext. only, and the dimensions of a frame for the hive he suggests would be very nearly the one we are now talking of for a Standard.

Now we have ample evidence that as much honey can be secured with frames a little deeper, spread horizontally; and the advantages of such a hive for the extractor are too obvious to need mention. We believe we have only then to consider the subject of wintering; one plan that will certainly answer is given by friend Palmer, page 29, and another is our present "hobby" of the stable manure.

That a few inches of chaff, straw, or old clothing, around a hive is no positive protection, we think is *generally* admitted, and unless we can give a colony a place that will keep fruit or potatoes from freezing, they had much better be on their summer stands. We wish some one who has had a positive experience in the matter would tell us how much manure would have to be heaped over a bushel of potatoes, heaped up directly on the ground, to keep them from freezing. Such a place, and such a temperature, from what we can gather from many experiments, reported from different points, would seem to be most desirable for bees to winter.

Having an entrance continually open on the south side would tend to make the bees colder than the potatoes, but on the other hand we have their own animal heat, to balance this disadvantage. A covering of earth would do of course, if thick enough to prevent frost penetrating, but having no source of heat within itself like the manure, and being so heavy to handle we must consider it out of the question. From what experience we have had we would feel safe to risk the bees under, half a wagon load to each hive; we would feed them meal at any time during the winter should opportunity offer.

It has been often objected, that they would fly out and get lost during unseasonable weather, to which we answer, they have as yet done nothing of the kind. They sometimes come to the entrance and look out, as much as to say "aint we nice in here?" and again they tip their heads on one side to observe the sun and clouds seemingly, but don't go out unless the weather is such they can readily get back. Remember no breath of wind touches them whatever may be its force or temperature.

As we have had our "say," we will now try and tell what hive we would advise, were a beginner to tell us as many have done, "Novice, I am just commencing and wish to commence right. What shall I use for a Bee Hive; all things taken into consideration up to the present time, what would you advise?"

Now it is with *very much* hesitation we answer in favor of the Adair frame in place of our time honored Langstroth standard, and one great reason we have for so doing, is that the hive for it can all be made of boards of a single and moderate width, also considering that the hive will never be used two story.

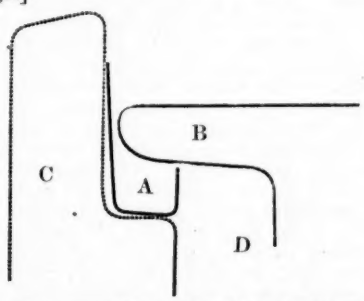
In practice 'tis found that we do not need quite, 1½ inches to the frame but that 20 frames work very conveniently in a hive 28¼ inches long inside, or 30 inches outside measure, as described on pages 23, 28 and 35, present Vol. With a permanent bottom board, we believe we would prefer the Langstroth blocks for closing the entrance, to any thing we have yet used; and one principal reason is, that they always guide the bees quickly and surely home; whether they are laden with pollen or honey and in eager haste to unload and get more, whether they are tumbling in pell-mell at the approach of a thunder shower, or whether 'tis only the juvenile Italians wanting to get home after having tried and approved their wings for the first time.

Really, how slowly we get along to-night; if we don't come down to business we shall not get our Standard hive done at all. Well, we would prolong the bottom board in front about 3 inches, and would have the outer end beveled off on an inclined plain, that bees might crawl up readily from the ground when heavily laden. We make the front end-board narrow enough to leave a space the width of the hive, ⅞ inch wide for entrance. This entrance when open full width, will afford all the ventilation ever needed, for in our opinion the wire cloth arrangements for ventilation are next in uselessness to patent moth traps. The entrance blocks we would make triangular, 2½ x 7½ x 8; they are pushed *into* the entrance.

Before the hive is used we would have the bottom board thoroughly painted, and then would keep it from the ground only by ⅞ strips clear around underneath; bottom is "let in" the sides to exclude wet. We do this because 'tis warmer near the earth, and less manure will be needed to cover them in winter.

Now in regard to hinging on the cover; with a length of 30 inches, *three* hinges are really needed, one in the middle and one near each end, and as Simplicity hinges can only be used at the ends we fear we had better drop them entirely for the long hives, as there is no occasion for removing the covers at all. To those who would remonstrate at so many changes in our teachings, we have only to say that all real progress must be a series of tearing down and building up again, and if we give you on these pages, *real life*, it must come combined with inperfections, and error. Those who have L. frames or in fact any other, can make a hive on this plan to try it, and use the combs they have. Where the width of the frame necessitates using a cover greater in width than 16 inches, we would make it of two boards, and to make the joint water tight, *sure*, we simply saw in to the edge of both boards to the depth of about ⅜ of an inch, thus leaving, when the boards are placed close together, a groove in which we may slide a tongue, made by folding a strip of tin one inch wide, thus: ⊂⊃ if water gets in as far as the tin, it can go no farther and if the crack is filled with paint, it—well, it's very good. A similar tongue made of wood is apt to check in time by shrinkage of the boards, which the tin cannot do. We have just made an L. hive to hold 30 frames with two joints in the cover and bottom made in this way; use the thinnest tin unless your saw cuts a very wide groove.

So many questions are asked about the metal rabbet, a place for it, bevel etc., that we give the following rude cut, explanatory. The rabbet A, is printed from a section of the tin rabbet itself, and in fact the whole diagram is printed from strips of tin bent up hastily. [We respectfully tender the idea to the craft free of charge.]



B, is the supporting arm of the frame resting on the edge of thin metal of A. For nailed frames, this arm should be dressed out very exact, for unless it is, the frame cannot hang true. We would also have the end sawed off to a sharp V shaped point where it strikes the back part of A, that the bees may have as little chance as possible to wax it fast. For this latter idea we are indebted to W. H. Shane, of Chatham Center, this Co. Our reason in fact for having a back part to the rabbet, is to get a smooth surface for the frame to strike on, and to avoid gumming; they are much less liable to attach it to tin than to wood.

The space under the arm at A, we have endeavored to have just large enough for a bee to "promenade" easily through; if they can't, they fill it with propolis. The tin is cut in strips 1¼ inches wide for the rabbets, the places where bent, and angles, can be taken from the drawing. C, represents a section of the ⅞ board with the place cut for the rabbet, ⅜ x 1⅛; we prefer this extra depth to give plenty of room to tuck down the quilt; the wood remaining, being just ½ inch in thickness. The bevel on which the cover shuts is just about what we prefer; for directions for cutting it exact, see March No. of Vol. 1.

It will be seen that we cut rabbet in C, square in, both ways, but the back of A, is slanted; this is to be sure to have the top edge of A, come tight against the wood, that nothing may get behind it, and to have the frames glide smoothly into their places when handled rapidly. We would give each frame about 1-16 end shake, having space D, between hive and frame, never less than ¼ nor more than ½ inch.

ABBREVIATIONS IN BEE CORRESPONDENCE.

WITHOUT question, it is of the utmost importance that every aid be given to facilitate interchange of thought and experiment, among the devotees of our present stage of advanced Bee-culture, and as almost every mail gives us evidence of some one having developed some particular feature, it is of great importance that those working in the same direction, exploring an unexplored region as it were, be put in communication with each other.

As an illustration, friend Wilkin of Cadiz. O. sends us a sketch of a plan for a floating Apiary to traverse our Western and Southern rivers, and in a few days, we think it was friend Klum, of Sherman, Texas, who desired our opinion of a similar plan; of course we endeavored to induce the two to open a correspondence. Now is it not plain that by far the greatest good will accrue to the greater number by giving the full P. O. address of each correspondent? Such is at least the view we shall take of the matter notwithstanding the fact that by thus giving our friends publicity they may be annoyed by circulars of all sorts of humbugs and even *counterfeit money* propositions etc. If we cannot keep them too well informed to invest in such trash we shall consider our duties poorly discharged.indeed.

Again, it has been said that the value of the advertising department is lessened by giving names in full, to which we reply, "be it so." When people are so well informed that there will be no need to *pay* for advertising, we will devote the space to some other purpose, for our purpose is to *inform* the people, not to keep them in the dark, and when we cannot get a liberal support for the former we will consider which is best, the latter, or the humiliating admission that we have mistaken our calling.

Now for our plan, after so much of a preface, and we really hope you will hear us through before you object. Postal cards are a glorious aid to Bee-keepers, and we had rather have a postal card brief, plain, and to the point, than the most elaborate letter, always supposing the writer, if he can consistently will have his name and address plainly printed on one corner. If our friends could know of the annoyance caused us by carelessly written addresses, and having to guess at the probable State in which a town is located, we are sure they would be more careful. A postal card will not contain a very long letter 'tis true but by omitting all forms and pitching right into your subject at once, they will generally do; they had better be dated to avoid possible confusion but this can be done very briefly, and if your address is printed on it, even a signature may be omitted. In regard to privacy, should every one who can, read all postal cards pertaining to bee culture, we hope, he would be the better and wiser and *we* none the worse off.

Novice has quite a laborious correspondence to get over and as his right hand is not as good as the left, it must of a necessity be considerably condensed. When our letters come from the office they are first carefully examined, and postal cards addressed by P. G. to all those requiring answers; those containing orders, or items for publication are distributed to their respective departments. Now Novice many times finds the card rather small as some of our readers may have observed, and such long words as "extracted honey," "fertilization of Queens," etc., fill out a line before he is aware of it, and the thought has many times occurred that such frequent terms might be abbreviated in such a way as to be perfectly intelligible to Apiarists and yet take but little room, whether they should be plain to outsiders or not matters little, to us. In reading a letter from Mr. Harrison who was one of Mr. Wilkins employees last fall, we were struck with a system of the kind of their own, which we found perfectly intelligible, viz; using Q's, for Queens and h's, for hives.

We would suggest the following table of abbreviations to be used in correspondence or in writing for this Journal, as our compositors will of course understand it. We would advise all to punctuate, observe the proper use of capitals, and in fact to omit nothing that might lead to an erroneous reading of the item.

Queen,	Q.	Fertilization,	fzn.
Virgin Queen,	v. Q.	Bee Keeper,	bkr.
Bee,	b.	Brood,	bd.
Drone,	d.	Comb,	cm.
Hive,	hv.	Brood comb,	bdcm.
Honey,	hy.	Worker "	wcm.
Extractor,	xtr.	Drone "	dcm.
Ext'd Honey,	xtdhy.	Feeder,	fdr.
Extracting,	xtng.	Frame,	frm
Fertilize,	fz.	Pollen,	pln.
Fertilized	fzd.	Propolis,	pls.
Artificial,	artf.	Prolific,	plc.
Langstroth applied to Hives or frames,			L.
Quinby,	" " " " "		Qy.
Gallup,	" " " " "		G.
Standard,	" " " " "		Std.
American Bee Journal,			*A. B. J.*
Bee Keepers Magazine,			*B. K. M.*
National Bee Journal,			*N. B. J.*

OUR OWN APIARY.

THE day being fine (March 1st,) our 13 colonies sallied out from beneath their respective manure heaps, and worked on the meal in a way that was highly gratifying, as we believe this is the earliest we have ever succeeded in getting them to take the meal. It was sprinkled on the summit of these same heaps to get them started. In the forenoon they worked on the south west side; at noon, on the south; and in the afternoon as the sun turned, nearly around to the west. The dark color of the manure causes the sun to warm it up quickly, aside from its own internal heat.

March 2nd,—We are so much pleased with the manure protection that we have put our entire 50 hives (all there is now) on their summer stands, and are making manure heaps over them as fast as possible. P. G. and Mrs. N. are decidedly of the opinion that the plan is any thing but neat and ornamental, whatever may be the effect on brood-rearing; and even little "Blue Eyes," (not quite 1½ years old) says "phfew," at the aroma given off in handling the steaming 18 *loads*, of the fermenting prod-

uct of the stables. Perhaps we might as well admit that Novice has gone wild over the project, and declares he never wants to put bees in-doors again to winter. It will be remembered the lower bar of the trellis is one foot from the ground, and by setting the hive about six inches back from them we can build the manure from the hive to this bar, in such a way that the entrance of the hive is nearly a foot back in the heap; the sun shines in here but no rain nor wind can enter, and the bees will come out and bask in the sunshine, apparently as happy as kittens, during days that are too cool for them to fly.

March 3rd—To day we finished covering our whole 50 hives with the exception of the Quinby hive whose great size appals us; all strong ones except that, are working merrily on the meal.

March 4th—We must have our Quinby hive enjoy all the advantages of the rest, and so we have taken away the hive entirely except the bottom-board and frames; have covered the latter with shingles and were thus enabled to get them in shape to be covered nicely. As they occupy but a comparatively small compass in this way, we should consider it an excellent plan for wintering the Q. hive.

We have found but one case of real dysentery, and that is the hive that hung on the Spring Balance. At the time of feeding them they had more sealed stores than any of the rest, but owing to the position they occupied they had been passed by when we did the regular Ext'ng preparatory to feeding, and as our things were washed up we, "kind of concluded" that it must have been mostly gathered from the half barrel of dry sugar. Well, we to day cleaned out the hive, covered the frames with dry straw, put the cover over it loosely *a la* Muth, and covered them up with the rest.

March 14th—We have had just two weeks of bad weather, some of it extremely cold and wintry. As most of the bees are out again to day, we concluded to be out too, making examinations. Spring Balance colony is dead; frames, combs, and bottom-board badly soiled with the disagreeable excrement nearly as black as tar, although there was plenty of bees, and abundant ventilation arranged through the straw. As there is nothing like it any where else in the whole apiary, we hope we may be excused for thinking if we had left them all with their natural stores we should have had many similar cases.

'Tis true, many of the sugar fed colonies soil the snow, and Mrs. N's. clothes on washing day, (she says they are sure to fly on Monday forenoons) but the spots are light colored and of a yellowish hue, and even when fed late, on their syrup, they never exhibited the symptoms of the colony just mentioned.

'Tis our painful duty also, to chronicle the loss of 4 other colonies; and a fifth that was found with about a half dozen Italians guarding the entrance from a series of such desperate attacks made on them by robbers, that we were led to look inside, and beheld the Queen disconsolately trying to "keep house" alone. This colony was the only one of the 13 put under the manure heaps in Feb., but what are in fine condition, and in their case they were so well protected from the cold that their numbers were thinned down, one by one, until the *last half dozen* were actually doing duty as lively as ever. We caged the Queen with her few remaining subjects, proposing to send them to "Cyula" (we hope you will all know her bye and bye) but "more troubles" interrupted this neighborly plan. The day had been unusually fine and the bees poured out in such glee, that we several times feared for our Queens, and sure enough shortly after noon we heard the *very unwelcome* note of swarming. We could with a good relish, have "taken a shingle" to every individual bee, that started the mania, but there was no help. One Queen with a clipped wing we caught in a short time, but one young unclipped lass we found just in time to get her out of a knot of bees at the entrance to another hive; this one we recognized from her shape and color, and put her in her own home forthwith. The other one—well, she died, for no other reason that we know of, unless she did it "just a purpose." Although "Cyula's" Queenless colony received no positive aid, they can take notice they are remembered.

As to the cause of the swarming out, we found the colony of the Queen that died, destitute of eggs and brood, although having plenty of bees, and so think it likely she had failed, as she was nearly 3 years old; the other was a remarkably prolific Queen, reared last fall late, and had a fine family of bees, with brood and plenty of everything. We can only guess that the bees went out with such a rush that she thought they wanted her to go too, and she "go-ed" but we hope she will be good now and won't any more.

We have now lost 13 colonies out of 57 and our only way of accounting for most of the losses, is that there were too few bees in the fall. This is not wholly satisfactory however, for one of our most populous, are among the missing, (see page 30 March No.) and three, that were among the very weakest are doing finely, in fact one of them had many more bees this spring than when put into the house. When Mr. Wilkin was here last Nov., we showed him a colony with the remark that it seemed folly to expect, such a handful of bees to winter, to which he replied they might nevertheless, and to our astonishment they are to day one of our fairest. Why didn't *they* dwindle down too?

If we were going to make any deductions 'twould be about like this: Weak colonies *may* build up, but the chances are greatly in favor of their going the other way; and the worst feature about it is that, judging from a great number of reports, we seem to have but little power to control the matter. Also, strong colonies *may dwindle down*, but the chances are rather in favor of their not doing so, hence we must conclude after summing it all up that,

STRONG COLONIES ARE ALWAYS SAFEST, and perhaps we might add, for all operations in Bee Culture.

March 18th—And the end is not yet. Two more stocks failed on account of insufficient numbers, in fact one colony hadn't "ary numbers" at all when we found 'em, but the combs indicated they had dwindled down to a very

small compass indeed before they left "tee-totally."

All we can do now is too keep saying over to ourself "we'll show folks how we can build up bees if we can't winter them."

March 19th—No more mortality, but we find a Queenless colony on which to practice our teachings. Have just made a feeding house or shed. The north and east sides are closed and south and west open, the roof slants to the south, leaving the eaves which project over the floor considerably, just high enough to walk under.

The meal is distributed on the floor, which slants slightly to the south, in such a way that the sun's rays strike it almost perpendicularly, some portion of it during the entire day.

The bees have been at work all day in it, although much of the time they flitted there and back during quite a drizzling rain; they also worked there briskly, in the direct rays of the declining sun long after they had ceased flying elsewhere. Floor is 6 x 12 feet (longest east and west) and roof is enough larger to protect it from ordinary showers.

'Tis in the north-east corner of our inclosure, and the tight board fences 8 f't high, keep off cold winds quite satisfactorily.

March 20th—An amusing phenomena. The day being too cool for bees to fly ordinarily, they kept at the entrance of their hives until the sun came out between the clouds, when they went for the feeding house with a rush; to return almost as quickly if the sun chanced to cease shining. At about 2 o'clock the effect was novel and striking, when all had been silent, after about 2 minutes sun-shine, we would have a sweep, and rush, to be followed by a small "roar" of happy industry. The feeding house being warmed only by the sun, was deserted as soon as it ceased lending it's rays. As an experiment we presented them with little heaps of wheat flour, corn meal, ground chess, rye and oats, and lastly dry sugar. All of the grains were dabbled at, generally new comers, but all soon settled down to a decided preference for the *rye and oat meal*. A few tasted the sugar but seemingly concluded the meal was of much the most importance.

FRIEND Gallup says in *A. B. J.* "Our theory is, that bees kept perfectly dry, discharge the excremental portions of their food in small and perfectly dry pellets" etc., now we protest against this on the ground that it's Quinby's "theory," and that he should be left entirely in undisturbed possession of it. After having given it publicity at length, in so many periodicals it seems rather hard to have some other writer claim it now; the more so, as we think it can easily be shown to be *an error the whole of it.*

Mr. Q. should remember that bees are constantly cutting away the combs, or gnawing them down in places, whether they have capped honey or not. The old brood combs containing cocoons are cut and dropped down along with the cappings, which are of a different color, as are pieces of different combs; this is all we find on the bottom-boards of our hives, and we have examined a great many. Like the assertion that the extractor killed the brood, this is a question needing no argument, for every bee-keeper can easily see for himself. If you wish to be sure, get a magnifier of moderate power, and also throw some in hot water as Mr. Q. advises, until the wax separates from the cocoons and propolis.

Gleanings in Bee Culture,

Published Monthly,

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EDITORS AND PROPRIETORS.

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MEDINA, APRIL 1, 1874.

B. K. M. came to hand March 6th, *A. B. J.* on the 7th, *N. B. J.* 23d, and *World*, on the 25th.

LEST it might escape your notice, we would remark that we are a little larger this month.

MR. CURRY writes: "The bees in the hot-bed must have ample ventilation," but we have found no trouble as yet when covered with a quilt.

AMONG our subscribers we find a George *Bee*,
And what is still more funny,
Another hailing from Cleveland, Ohio,
Rejoices as, Riley *Honey*.

WE wonder if the following from JOSH BILLINGS, won't apply to bee-keeping: "You'd better not know so much than to know so many things that a'n't so.

CLUBBING rates will be the same as given last month with the exception of the *B. K. M.* which has been advanced to 1.25, consequently price will be with GLEANINGS 1.75 instead of 1.50, and $4.25 for all four.

MR. Quinby gives full directions for making his hive in *Country Gentleman* of March 19th. The article certainly merits the thanks of the bee-keeping community, for it is a well directed effort toward enabling those who wish, to make their own hives.

IN *Rural N. Y.* for March 21st, we find excellent reply to Prof. Riley, on Bees and Fruit. The writer covers the whole ground we believe, unless it be that he omitted to consider the *moral* effect it might have on a community, if the plan of poisoning, were adopted whenever a neighbor's stock became annoying.

IN describing the Buzz-saw last month an error occurs in the positions. When the operator stands at the end of the table, the balance wheel should come at his right hand; the saw just before him; the sliding figure 4 shaped piece, at his left, with the square bar nearest, and the diagonal, farthest from him. Also the "parallel bar" seen hinged to the back of the table in fig. 4, must be on the right, directly over the balance.

AS ours is somewhat an experimental Apiary, and our time necessarily much occupied with this "growing child." (GLEANINGS) we fear we shall not be able to furnish either Queens or bees before July, more than we have already orders for. Messrs Shaw & Son, Daniels, and Dean, are making preparations to rear them largely, and can probably furnish better stock than ours also; we would therefore advise that orders for early Queens be sent them.

OUR readers will notice that we are now using the mailing machinery, and if the date after the name is not found to indicate the time at which their subscription should expire, we hope they will advise us at once. A small 3, before the word Jan., indicates

they have had Vol. 1., also; and if fig. 7, precedes the 3, it means they have both the Photo., and Vol. 1., in order that we may know in answering any inquiries a subscriber may make, what he has at hand to enable us to make our answers fully understood, without going to too great length in writing him.

'Tis no very difficult matter to make any of the hives you may have in use, over into the New Idea plan. All that is necessary is to remove one side from two of them and fasten them together side by side. The covers and bottom-boards can be united weather proof by the strips of tin mentioned on page 39. Make the joints air-tight, and then make them look as well as you can with paint. Although, 'tis true, new hives just as we want them are rather nicer, yet many feel as if they cannot afford to throw away their old ones, and we *must* avoid paying cash out, certainly, if we are going to make the business self sustaining.

Every day brings reports from different localties, of successful wintering; those wintering in doors and out, on sugar syrup and natural stores, with old bees or young, upward ventilation and lower, and even with stores *entirely unsealed*, both of honey and syrup, in fact under almost all circumstances, seem alike to have been successful. Can we not all join together in a feeling of gratitude and thankfulness, without stopping to quarrel over who was right and who was wrong. One friends who feel inclined to be so very sure they have found the bottom of the matter, should remember that where all have succeeded, nothing is proved. [Since the above was written a *few* losses have been reported.]

"Why, Mrs. Tupper!" Is it possible your bees *also* object to using combs transferred in a different position from the one in which they were built?

We have for years used the combs cut from tall box hives, turned down horizontally, and transferred at one time the combs from 30 American hives to the L. frames, turning a half of every comb. We have many times also for experiment turned deep store combs *upside down*, and they filled them with honey right speedily.

Again, our Revolvable and Reversible friend Price, has a hive that admits of being revolved every few days *to make the bees labor more industriously.*

We haven't heard from him at all since his controversy with Dadant. Where are you friend P.?

It's a funny way, some people have of abusing another in print, and then apologizing by letter. It certainly makes it all square, and perfectly satisfactory, besides being soothing to the feelings.

It often reminds us of the woman of Irish birth, who after having sold a heavy silver watch case to a Jeweler, and got the money carefully knotted in a corner of her handkerchief, remarked exultingly,

"And it was my Jemmy as stole the watch from one of the 'b'yes' at school, he did."

"Stole it did you say?" replied the alarmed Jeweler, extending the watch back toward her.

"Ah, faith and be jabers and didn't I larrup him well for it? It's all right." And off she marched triumphantly, leaving the Jeweler to moralize on *her* way of easing ones conscience.

We shall really be obliged to state for the benefit of a thoughtless few, that our large supply of the different No's of Vol. 1, cost us considerable money, and we cannot *give* them to those who did not subscribe for them. We value complimentary letters where we think them sincere, but when they wind up with a request for something of which they have omitted the necessary remuneration for the cost of getting up, we have a kind of feeling that we would regard the enclosure of the modest little sum of 75c. as the highest compliment that can possibly be paid GLEANINGS. We really shall have to make it something this way: Sample numbers, our choice, free; your choice 10c. each.

Of course we shall always think it a pleasure to furnish our *regular subscribers* with missing No's, or to replace any they may have loaned or soiled in procuring subscriptions, *free of charge.*

Mr. Moon takes nearly a page to show that we pronounced the introduction of virgin Queens risky, but afterward *discovered* it to be much easier than the introduction of fertile Queens. Mr. M. also states that it was well known before, which we are very happy to hear, for *he* certainly has faith then in a matter we expect to have stubbornly contested. For instance: In *B. K. M.* for March, Mr. King replies to a correspondent who asks if t'will do to introdnce Queens as soon as hatched, in the following prompt and ready manner:

"No. Bees are more inclined to kill unfertile Queens"

Now friend M. you will do us quite a favor if you will show Mr. K. his error.

"Our Discovery." Well 'twas substantially this:

A Queen newly hatched will treat the first bees she meets as if they were of her own family, and they in turn either pay no attention to her, or treat her kindly; but if she has been with the bees of any particular hive long enough to get acquainted (even for *one hour*) she will act as an intruder among any other bees, and will be liable to be stung. Had Mr. M. been over our experiments detailed in Vol. 1, he might not have misunderstood our remarks. We would like to add that the *World* is improving, but we find *seventeen* distinct errors in spelling, punctuation etc., in the editorial referred to. Mr. M. may be an excellent practical Apiarist, nevertheless.

HONEY COLUMN.

Every good housewife, is supposed to know how to serve up honey for food without any instruction, and all are familiar with its fitness for warm biscuit, or hot buckwheat cakes, but we beg leave to suggest a dish, in our opinion far superior to either, and certainly more wholesome. Get some clean nice wheat, the best you can find, have it ground so coarsely that the grains are just broken, in fact we call it "cracked wheat"; a common coffee mill set very coarsely will grind a sample for you to try, but in our family nothing short of that "everlasting windmill" could begin to supply the demand. Boil it thoroughly with just enough water to allow it to turn out of a dish when cold, like jelly. To serve, cut it in slices and warm it in the oven until it will melt butter nicely, pour on plenty of clover honey and ——we leave the matter with you, we are done.

Yet stay! It only costs per lb, just one half the price of wheat flour, and if you wish to "hold out" till noon on a heavy day's work that must be done *before* that time, try it.

I have 250 lbs comb honey, mostly basswood—want 25c. for it, here. J. F. Temple, Ridgeway, Mich.

I have about 1400 lbs ext'd honey, from golden rod buckwheat and boneset; I am offered 13c. but want 15. Feb. 24th 1874. James Heddon, Dowagiac, Mich.

DEPOSITORY OF BLASTED HOPES,

Or Letters From those who have made Bee Culture a Failure.

TO the Editor of GLEANINGS:—We have lost 15 colonies out of 57, and what is more, several others are so weak in bees, we fear we shall lose more. Can you give us any advice?

From your old friend, *Novice*. Medina, Mar. 24, 1874.

Yes. Stop trying to teach others how to winter bees, until *you can winter your own without loss*; meanwhile listen to those who *do* do it.

I put into winter quarters 43 colonies, took out 27 alive, probably will not get over 20 through till fruit blossoms appear. Father put in 38 colonies and took out 5 alive. In every case without an exception those that are alive, are those that were strong in the fall. Probable cause of their death was dividing and subdividing to raise Queens last season. Now sir if I don't have strong swarms after this, I am mistaken.

We have just got our high board fence done around them, and think it will be a great help. I am not at all discouraged yet, but, sometimes get a little *blue over it.*

Father and I will have 40 to 50 swarms to commence with; he has purchased 12 swarms to-day and will get more. I never saw bees carry in rye meal as fast as they have in the last few days, little and big swarms, and the Queens are doing their best; no deserting yet. If hemp will supply bees with pollen we shall raise it. Just got some seed to sow.

Chatham Center, O. March 19, 1874. F. R. SHAW.

That's the tune to wind up with, friend S. If some of our "hopes" are "blasted," we ain't "licked" by considerable. It may be well to state that both S., and ourselves used stoves in our bee houses when the weather was quite cold, while the rest of our Medina bee-keeper's used none: we are the only losers; Dean, Blakeslee, Shane, Daniels, and Parsons, have all done well, the two former losing none. If our "tinkering" with stoves shall prove a warning to others, we don't know but we "feel happy" after all.

PROBLEM 20.

IT'S been a long while coming but here it is; we wish our readers to get at it, just as we did. We wish friend P. lived near us that we might compare notes with him as we are almost "in the same boat;" besides we really have much sympathy and respect for all honest preachers, but not for the class who put *Rev.* before their names simply for a lever to help them sell goods, as one of their number once expressed it; but our friend has the floor; we're rather backward—never "talk" much.

MR. NOVICE, Dear Sir:—I wish to ask you a few questions. Four years ago I commenced bee-keeping. First year increased from 12 to 26 swarms, lost all but one first winter—dysentery. Made of that one left, and one more bought in spring, 8. Sold the 8 in fall because had to move, (am an itinerant Preacher.) I now have only 2 swarms, wish to build up an Apiary of 50 to 100. I would build up to that, this summer and sell ⅗ of them in fall if I could, as bees are nearly all dead around here and would sell well, I think.

Now how shall I do? Shall I use full swarms, or Nuclei? or shall I use both? I suppose I should use *some* full swarms but *what proportions?*

AND NOW COMES THE PROBLEM PART.

Will it pay to use syrup to make combs when there is no pasturage? or will it be cheaper to *buy* combs?

I am located 1½ miles from a Basswood grove. Would bees do well that distance? or would it not be better to move a few of the strongest swarms to the edge of the grove during the Basswood yield?

How would it do as the Basswood harvest commences, to strengthen some few of the strongest swarms in two story hives, or long Gallup hives, and take them to the grove during the harvest and extract as often as possible? Z. D. PADDOCK.

Light House, Ills. March 13th, 1874.

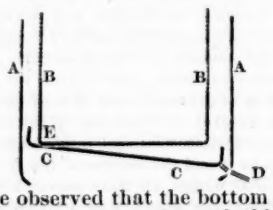
Since our losses we are getting afraid to advise, but will hazard this much: We would use only full strong stocks, and do all our dividing by taking a full comb from each and making a strong stock at once; then when you are compelled to stop on account of winter, you are all right.

From the experiments we made in artificial comb built on foundations, we think nice combs *can* be made by feeding sugar, cheaper than they can be bought, see page 4. A very little feeding will keep comb building going on, in warm weather.

In regard to the Basswood grove; Italians will work very well 1½ miles. We should say, take all or none, and be constantly with them wherever they are.

HOW TO MAKE A WAX EXTRACTOR.

TAKE this paper to your tin-smith. Tell him to make a bottomless tin dish, (with a close fitting cover,) about 9½ inches high by 12½ in diameter, as seen at A.



It will be observed that the bottom edge has a rim attached, tapering inward, this is to be made just right to fit inside of a common tin pan, which we use to generate the steam. B, B, is a plain basket or can, made of coarse perforated tin; it has strait sides and bottom, and joints are simply lapped and soldered; size is 8¼ high, by 10¾ in diameter, this is to hold the comb or cappings. Now, if this were simply suspended inside of A, the wax when melted would run down into our tin pan boiler. To prevent this we have a tin plate C, 11¼ inches in diameter, with a rim 1½ high around the edge, held permanently by three supports soldered from it to the outer case A, (besides spout D,) so as to hold it sufficiently on an incline to allow the wax to run out of the spout D. Now when we have three supports fixed in this pan in such a way as to hold our comb basket B, B, in a level position, and exactly in the middle of A, (the back edge E, nearly touching the bottom of the pan C,) it is done. The spout D, only projects about 1½ inches, but another one about 6 inches long is made to slip over this, to carry the wax off from the stove into a proper receptacle.

The whole arrangement is to be kept in the honey house set over a common tin pan as mentioned, and the cappings, waste bits of comb etc., are thrown into it as they accumulate. The short tube D, must be kept tightly corked to keep out bees, and to keep in the honey. When the comb case gets full, lift it off the pan containing the honey that has drained out, and set it over a similar one containing boiling water on the stove.

By having them made at home you save freight, but if your tinner can't make them for $3.00 tell him we will. P. G. says they should have "ears" to lift them by.

A SHORT CHAPTER ON POULTRY, With a moral that may have a bearing on Bee Culture.

ONCE upon a time a lad "got up to the head" in his spelling class, and what is more he did the same thing, not only once but several times, until he eventually secured a silver quarter of a dollar, awarded as a medal the last day of school, to the one who should have earned the most head marks. On his way home on that eventful day, he mused somewhat in this way: "spelling I have conquered, or at least pretty nearly, (remember he was of only about a dozen summers,) and now what is to be "licked" next, and what is to be done with the silver quarter?" If we follow him a little, we may discover his project for solving the two problems at once.

That same afternoon after having obtained the maternal sanction of his plan he trudged off 2½ miles to "Grandfathers;" and "Grandmother" being absent the following colloquy occurred:

"Well, what's broke now?" queried Grandfather who sat by the fire in the old "cellar kitchen."

"Nothing's broke, but I want to buy two hens."

"Want to buy *two hens?* what for, where is your money?"

A display of the quarter, and a relation of how he came by it, seemed satisfactory, and then came the query:

"But don't you want a rooster too?"

"No, *they* don't lay eggs."

"You are only intent on making money then?"

"Yes; if they lay eggs enough to buy more hens, I shall probably get a rooster too, but just now I only want what the quarter will pay for."

"You would not take a rooster then as a gift?"

"I had rather not."

A bargain was soon made, after the above preliminaries, but we must digress a little here to explain that beside the fire place in this old cellar kitchen a brick oven had been built in the wall, and Grandmother had so far domesticated two large cream colored "biddies," that they had for some time been in the habit of laying great white eggs in this same oven; after which feat they modestly betook themselves out doors with the rest of the fowls; but it always seemed that these two hens had a kind of a way of looking up at a body as if they knew something that other folks didn't; they only approached their novel nest when Grandmothers back was turned, and rarely if ever intruded in the house at other times.

Now regardless of the "great store" she "set" by these two, Grandfather picked them up probably because it was less trouble, and our hero of the spelling book was traveling home happy, with a hen under either arm. To confess the truth we fear his enthusiasm *was* somewhat abated before he reached home, and his musings as to whether these two hens were not *unusually* large, were once brought to a dangerous crisis by his slipping down on a steep rough gravelly bank when near home. 'Twouldn't do to let the fowls go after all this trouble, and so he "held till 'em," but to judge by the twist of his mouth at this time, we should think those gravel stones were probably quite harrassing.

The fowls were duly housed and cared for, and many a happy hour was spent in devising improvements, by way of giving them a wider range without any excessive cash outlay; furnishing them a better variety of egg producing food, studying all the agricultural papers had to say on poultry keeping etc., etc. Bye and bye, a Poland hen with a brood of 14, comical top-knotted chicks was added; they were purchased for a small sum, of a neighbor who had become tired of their mischievous propensities.

Regular accounts were kept and the "hen business," as his sister termed his hobby, really paid; not much it is true, but when the young Poland pullets began to lay in Feb. and eggs were *eighteen* cents a dozen, our young friend felt as happy as the proprieter of a small Gold mine.

And now we come to the "pint" as Major General Jack Downing used to say, and in fact we should not have written so much on Poultry for a Bee Journal had it not been for this same "pint."

This same poultry house and yard, built of old rotten boards, refuse lath, and all sorts of odds and ends, was on the *south side* of the *horse barn*; the family poultry house, a comparatively large and expensive affair being directly *east* of it; with the MANURE from the stable bounding the west, which in fact before spring, came very near covering the whole structure entire, do you wonder those hens laid eggs? On the ground of economy the roof was entirely open on the south side, so the sun shone directly on their scratching ground, and some tempting nests were formed by bedding boxes back under the manure with entrance partially obscured by straw. Of course eggs never froze in them, and in fact the back part of their domicil was quite a warm retreat during the coldest days. Considerable of this coarse stable manure was scratched through the loose structure, and to furnish them employment their grain was buried in this, which kept them scratching the material over and over until it was like sawdust, thereby keeping the ground under their roosts always clean and wholesome, on the plan given by Mr. Stoddard in the Egg Farm papers in *American Agriculturist.*

In this case it seems a condition was secured free from frost, wind, rain and snow; yet admitting sunshine during the middle of the day all winter long. Is any thing else needed for the successful wintering of bees?

After enlarging the "hen business" and trying it away from the barn and *manure heaps*, it did not pay as well, yet the real cause, probably, of the difference in results was not thought of at the time.

P. S.—"Grandmother" was very much inclined to be vexed at the loss of her "pet biddies," yet under the circumstances, and in consideration of their being in the hands of her favorite grandson *Novice* she at last became reconciled.

Also, we omitted to state in the proper place, that Father's larger number of fowls in their large poultry house, with 24 elaborate nests,

gave but very few eggs compared with ours, and they almost invariably froze, as did the combs and feet of the fowls, besides.

Humbugs and Swindles

Pertaining to Bee Culture.

[We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.]

THERE! that's just our luck. Lizzie Cotton has been offering her $15.00 Controlable hive for *seven dollars*, but the magnificent offer was only to remain open until Feb. 24th, and we didn't get the circular until March. After above date, price is positively be as heretofore $15.00. This hive is not patented; oh no! but if $7.00 gives a profit we yankees would like to know—There! we wonder if the $10.00 Honey receipt isn't offered for less than half of its value too, *for a very few days.*

Very few patent hive circulars have come in of late, yet there are other swindles in the bee business that need ventilating. Foremost among them comes our Queen-rearing friend of Kelley's Island, who writes letters using the terms "thee" and "thou," we're sure we don't know for what reason, for he can't be a Quaker. *They* wouldn't advertise as he has done, at extra prices, and then send those reared elsewhere. A gentleman who will come forward if need be, tells us there was not a single Queen reared for sale on the Island last season, and that our "thee" and "thou" friend did not reside there. Worse than all, the real genuine *Foul Brood*, is raging there badly, and he was informed, they had been unable to stop it, even though they had tried burning, burying, and all prescribed remedies. As there are but few colonies there, could not our Ohio Bee Keepers afford to buy them, and have them entirely destroyed until such a time as the Island shall have become free from contagion. Those who have had experience can tell that the disease is no trifling matter.

Would it not be better in shipping Queens, to use only sugar or candy, and to destroy all combs received with them. It really seems no more than just that every locality where the disease has prevailed should be given publicity, even should it occasionally result in pecuniary loss to single individuals.

If any facts can be brought to show we are in error in regard to the Island, we shall be most happy to publish them.

Another class of evils cries out for a remedy; the following extract will illustrate it. We stand ready to furnish all names when necessary.

DEAR NOVICE:—I am much obliged to you for your service in the matter between me and ——. I shall write for him to return the money and should he do so, you may withhold the complimentary notice I sent you, as I should dislike to do any body an injustice, and am willing to give him the benefit of his *explanations*, though *its* hard for me to believe.

About the same time (1872) I sent the money to ——, I also sent ($30.) to—— ——for two *Imported Italian Queen Bees*, I still hold their acknowledgement of the receipt of the money, but the Queens have not come to hand, nor have they returned the money; they wrote me once that they would send me some of their *wares*, or any thing else they had to sell, but I do not want their *wares*, nor the bees now, as I have rec'd Queens from other parties. I have so informed them, but the money is not forthcoming. Money is as scarce as "hens teeth" down here, the use of the $30. would have been worth $5.00 to me for the time they have had it.

J. P. PARKER.

Alamo, Tenn. March 5th, 1874.

The remedy we should suggest for such cases would be to send directions with the order to have the money returned unless the order could be filled inside of 10, 30, or 90 days as the case might require. Parties who cannot comply with such a simple request are not deserving of patronage, and should be held up publicly to warn our friends and neighbors.

Reports Encouraging.

LAST season was a splendid honey season here. One Italian stock gained 6 lbs. in a day, and built the comb. A new Italian swarm came out June 9th, and filled 9 frames of comb, each frame 10 x 14 outside measurement, and 35 lbs. surplus; the surplus was removed and the rest left for winter, and they are all right to-day; the 35 lbs. were all sold at 60 cts. a lb., giving me cash money $21.00, how is that for Italians?

Limeport, Pa. THOS. F. WILTMAN.

FRIEND NOVICE:—My Bees (35 colonies) have all wintered all O. K., 16 on pure loaf sugar. Kept in house built on same principle as yours. *Think*, the sugared ones, the most dormant. All had a good fly on March 2nd. Hard work to wake up the Italians, *particularly* those we fed on "sugar syrup." All the blacks I have (5 colonies) were quite uneasy and hives slightly soiled, but colonies strong. I now think that a warm house, (not below 40° F.) "Sugar syrup," and Italian Bees, combined, make wintering a certainty. Raised over $800. worth of honey from 16 colonies, last season, and expect to fill the cellar, the coming year. Don't *much* expect to revolve quite so much *can*, the coming season as we did last.

I think the cause of my success is, that I made apiculture a *specialty*. Do not think farmers should keep bees, any more than run a carpenter's shop, or saw-mill. For a good job, one iron in the fire at a time.

JAMES HEDDON.

Dowagiac, Mich. March 13th, 1874.

Now friend H. you have certainly hit the nail on the head in one thing, and by the way it hits *us* pretty squarely on the head too. There may be a difference of opinion in regard to farmers keeping bees, but 'tis morally certain that one thing *done well* affords more pleasure and profit too, than a dozen things done in haste and of course poorly done. We really believe our present loss in wintering was on account of the "too many irons," for we really could not find time to do, what we earnestly insisted on having our readers do, viz: build up our colonies strong in the fall. We have a desperate determination now of giving our whole time to GLEANINGS and the bees, and if some of the pesky "irons" don't get scattered right and left regardless of the loss entailed it will be—well, if the consequence should be that we don't earn more than 25c. a day, we'll make our expenses come under 24, and we'll just enjoy ourselves, having fun with the bees, and writing letters to such pleasant friends as yourself Mr. H. and the rest of our bee acquaintances. We have made our Journal larger this month just on purpose to have a "big talk," without feeling we were crowding something, and to allow our correspondents to compare ideas more freely also.

FRIEND NOVICE:—I took my bees out of the house March 2nd, and found the entire one hundred stocks I put in last fall all right. That's pretty fair for bees that were mostly wintered on natural stores, is it not? You had better *look after* that "Sugar Diet" or I may be induced to get a wind-mill or two, and start a rival to GLEANINGS, to advocate "Natural Stores." JAMES BOLIN,
West Lodi, Ohio. March 17th, 1874.

Three cheers for friends H. and B. If we can't swing our hat over our own success, we certainly will at every such report, and we only hope it may get swung all to pieces, [cause then we'll have a new one,] during the next month.

Heads of Grain,
FROM DIFFERENT FIELDS.

WOULD hives of the "Simplicity Persuasion" do for frames like mine 12¾ x 14, out-side measurements? How would you keep the frames of such size from swinging together, and against the side of the hive, without tacks? How do you manage when your hives get so full of brood by extracting, there is no room for honey? I find the only remedy to be boxes. What per cent of your dollar Queens may be reasonably expected to be pure?
Wyoming, Wis. R. L. JOINER,

The frames would have to be made with considerable care that they might hang plumb, we have used them 12 inches deep and found them to work nicely with *nothing* to keep them in place, at all. We believe those who handle many frames, very soon reject all nails, staples, and every thing of the kind as too troublesome, besides they are entirely unnecessary with ordinary workmanship. In place of the boxes we would use an upper story, or increase the width of the hive on the New Idea plan. Our $1.00 Queens should be at least half of them "good for 3 banded bees." In the neighborhood of Shaw & Son, last fall, so far as we can learn they proved nearly all pure.

DEAR "NOVICE":—I have received a specimen copy of your "GLEANINGS," the reading is good, composition done well, the press work—allow a suggestion in regard to that, a little more "impression" and then "feed" up to your "guides" so as to get a "register" on the "head rule." When I chance to hear of an Apiarian interested in Printing or *vice versa*, I claim a right (not patented) to be impudent; the latter "is one of whom I am which" hence the liberty of criticising "GLEANINGS." Enclosed (you have found previous to the present reading of this sentence) a card that I have just completed for you, accept as a token of appreciation of your efforts to promote ("sugar syrup" and) apiculture. Of course they do not come under the head "of its being sincerely wanted," (quotation from "GLEANINGS") but then you can put my name down on the subscription book, and I will pay when I render the "FAT" from the "CRUST" of our old "PI" and sell for soap-grease.

Novice can honey be extracted from the comb before it is capped by the bees, *and be considered pure*, or in other words during the Linden or Basswood harvest, can it be thrown out as fast as the combs are filled before the water has thoroughly evaporated, and in such cases is it not liable to sour in the jars? Will it pay a person with 7 or 8 hives to purchase an extractor?
Leavenworth, Kan. ALONZO BADDERS,

Give us the criticisms by all means, we value them more than we do commendations. We know the register isn't good and we keep trying to do it better. It takes "home-made" printers a little time to grow into good ones. Thanks for the cards, we have put your name down of course.

You can of course extract the honey before it has been gathered an *hour* if you like, and it will be pure honey, but it is thin like sweetened water and has a raw taste and will most assuredly sour.

If left until the bees just begin, to cap it over it will be all right, and in no danger of souring, and we thus save much labor in uncapping. *We* should use an extractor if we were never going to have more than *one* hive of Italians; if we did not make the honey pay for it the first season, we would the second.

In regard to the raw, unripened honey: we think, but are not positive, that evaporation in a slow oven will give it all the good qualities possessed by that ripened in the hive by the bees. An ingeniously written article in the *Rural N. Y.* for Feb. 14, would imply to the contrary, but we must think it more theory than actual practice. We will try and make some careful experiments in the matter at the proper season.

I don't think it would be an easy thing to brush the bees off the combs of a hive running over with my cross hybrids. If I conclude to make an Extr. I will send to you for inside work. Will a molasses barrel sawed in two do?
Gallupville, N. Y. B. FINCH.

When they are busy gathering honey they seem to care but little about being shaken and brushed off; at any other time, you would be likely to have trouble.

A molasses barrel will answer every purpose, but it is hard to clean, and heavy to lift around. Honey soaks into wood (unless it is waxed) and we think you will find an Extr., all metal, rather preferable.

Do you think small Queens as prolific as large ones, and small workers as good honey gatherers as larger worker bees? Would not wire cloth do instead of tin, for the bee-feeder? How many holes to the square inch is necessary for the perforated tin? Please speak of this, unless you prefer not to give it to the public.

Will it do to use vinegar or cider barrels for honey if they are scalded with lye water and then painted over inside with wax and rosin as you describe?
Roseville, Ills. MRS. S. J. AXTELL.

We remember one small Queen that was quite prolific. At some seasons all Queens are small, yet we think those uniformly large, generally most prolific. We have one or two Queens that reared small bees, and although well marked they did not seem so industrious as others, and were never very profitable stocks. About perforated tin—see page 34.

Wire cloth will answer but it is liable to get bent out of shape easily, and cause the feeder to leak. All we know on Bee-keeping or in fact *any thing else* is cheerfully at the service of our subscribers; we only regret our inability to give better advice on many points.

We should have no fear in using the barrels if they were first made dry and then perfectly coated with wax. They must be very stout, and should be iron bound for honey is very heavy.

I rec'd a letter from my wife in Ill. that one of my Imported Queens was dead, the combs were as clean as they were in the summer, no signs of any disease, but a mouse had eaten in at one of the mortises in the top bars and had eaten all of the bees on the bottom board, but had not eaten any of the combs, there were not 12 bees alive, now did that mouse kill that swarm or did he eat the bees after they were dead?
Yours truly, D. A. BROCKWAY,
P. S.—They had lots of Sugar Syrup left.

Mice raise "hobb" with our surplus combs when any honey is left in them, but we have never known them to *kill* bees; still such reports are current. Wire-cloth is a preventive.

DEAR NOVICE:—I am an amateur Bee-keeper and and honey raiser, (if amateur means for the love of the thing,) with 20 swarms in movable frames. I was humbugged into buying a Patent hive some four years ago. Although the hive is a good one, the "*patent*" part is of no use to any one not a "*bee master.*" I now wish to sell full colonies, but the patent man lives near, and warns all who wish to purchase, that they must first buy a $5.00 right from him, and so my neighbors with American and Langstroth hives, sell bees and I sell none. This is a feature of the patent hive business, I would like you to suggest, in GLEANINGS a remedy for.

Pay no attention to the patent; when you wish to sell bees tell your purchasers you will stand between them and all trouble, and if any trouble is made send us the date and name of the patent hive. If we cannot find fraud and humbug in the claim, somewhere, we really believe it will be the first patent hive we have overhauled that was not an empty pretense.

Is a honey quilt, of two thicknesses of ducking, warm enough for spring months, and out-door wintering, with no other covering except caps?

We use batting between the two always. We are at present inclined to give the straw mat the preference for winter and spring; with a loose cover over the mat to keep out rain; with straw first, and then coarse stable manure to cover the whole hive, we have something that comes very near straw hives for wintering. We have yet to learn of an unfavorable report from bees wintered in the old straw hives.

My experience confirms what you say in regard to sealed brood being in no danger from careful extracting, but eggs and larvæ are "slung" for all they are worth.

With a proper Ext., there isn't a particle of need of throwing out unsealed brood. We never knew *eggs* could be thrown out. Had'nt you better let your wife turn it? We fear you have too much strength to be trusted with such work.

My clipped Queens, for some reason, are soon superceded. Others *may* be as short lived, as I have no way of marking except by clipping. I never have seen a clipped Queen over 2 years old, although I do not doubt that others have.

We have given the matter for several years careful attention, and find short lived Queens and long lived Queens both among the clipped and unclipped in such equal proportions, that we feel sure it has no other effect than to somewhat mar their beauty.

Is Quinby's Queen yard practicable? I do not find it so, as the bees cluster and fill it, and the Queen escapes by crawling over the cluster.

Many things contribute to make it a failure, yet some report quite favorably in regard to it, when they depend on natural swarming. As for ourselves we should find such an obstacle always in front of our hives, an intolerable nuisance, and to those who are in the habit of walking among their bees as much as we do, the danger of being constantly liable to put "ones foot in it" might be provocative of a tendency to profanity. Again, should some of our lady visitors make an ungraceful stumble and land in the "Queen-yard" we might find our profound explanations unpleasantly interrupted.

How am I to make a *cool* dark *dry* place in July and August, to store comb, and honey in frames?

Don't have a cool, dark, dry place at all, but put your combs in a hive that will shut up tightly, (we know the patent ones never do) and you can keep them safely as long as you like, only observing this caution: Combs removed from the hive in warm weather are liable to contain eggs of the moth; therefore they should only be removed in the fall when it is cool, and if kept shut up they will be safe until needed, or during all the next season if you choose. They never mould unless wet or damp. Freezing, always kills all eggs of the moth as has been abundantly proved. We keep our hives containing empty combs in the barn. As for comb honey; extract the honey and put the combs back in the hive.

I want some idea of a Queen Nursery, without buying another "*patent.*" I once owned half a Peabody Extractor, but contrived a rude one myself, that works far better, and sold my half of old Pea. for $5.00, twice the cost of the one I now have. I use a tent to extract in, and winter in a pit. I depend on the extractor for honey, and artificial swarming for increase. Shall try the New Idea plan next season. I have tried the two story plan, in connexion with Hosmer's, "Feeding to stimulate breeding," and failed, on account of tendency to swarm as soon as strong. I would give something to know how to certainly prevent a strong colony from swarming. When you get the Photo of my aplary (if you ever do,) you will see my wife in Bloomers, helping me handle the frames and so on, as fearless as myself, although two years since she was as much afraid of a bee as of a rattle snake. Yours truly,

Wyoming, Wis. R. L. JOINER.

Nothing more than extracting is needed to prevent swarming. 'Tis the rarest fun for us to have a colony so strong they begin to think of swarming; give them empty combs one at a time, and room as fast as they can use it, and your trouble will cease. Tell your wife we are proud to learn there is at least a few who dare be useful *by their husband's side.* Perhaps there are more than we know, but too many are afraid of stings, or rather they think they are.

I have 6 colonies of bees all in movable comb hives, and 4 different kinds of hives. Now I want to get a hive that is right and stick to it, I am tired and sick of so many kinds. I cannot divide my bees for the frames are all different sizes.

Tecumseh, Mich. W. COMFORT.

We wonder how many of our friends know from past experience just how "Comfort"-able it is to have four different kinds of frames and only six hives at that. We wonder if our friend wont go for a universal Standard.

Messrs. Eds. GLEANINGS:—Please give us the best information you can in regard to uniting different colonies of bees that stand at a distance from each other. Dunlap, Ill. D. G. HERVEY.

There are several ways, but all troublesome we believe. As a general rule we would try and build up weak stocks before winter that there may be no occasion for uniting. Notwithstanding what has been written about two colonies united, consuming less honey than when separate, such has not been the case with us, but quite the contrary, and besides the double colonies were no better in the spring than the rest. Moving the two stocks gradually near to each other, is too laborious and slow, when the distance is great, or there are many. We think the readiest way is to wait until the weather is tolerably cool, so the bees do not fly; smoke both and lift the combs and bees from one into the other, rejecting such combs as contain least stores and pollen; if no warm weather ensues for a week after, they are all right, if suitable weather for flying should occur soon, fasten them in for a week, or what is better put them in the cellar for that length of time.

Continued from front cover.

the necessity of painting them any more than ordinary household tin ware. Clean tin, can be washed with boiling water; when painted or japanned it cannot.

I have got the Extractor finished, am well pleased. I took the gearings and inside work which you sent me to Chatfield & Smith of Anamosa. They did me a good job. I had it finished in the best manner, it is all metal, runs like a top, and my wife can pick it up and take it where she pleases. I would not exchange it for any other one I have seen.

Viola, Iowa. R. J. TALBOT.

ABOUT ADVERTISEMENTS.

AS a matter of course we receive but a limited number of advertisements, compared with what we would did we make no discrimination, but insert every thing offered, without a care as to whether the parties were proposing to do a fair business or not. Our ideas on the subject are given exactly in this little note just sent in with a new advertisement.

Will try to use my customers as I would wish them to use me. Yours truly,

Ashland, Ohio. E. J. WORST,

This sums it all up exactly. We ask nothing more, but when one does not scruple to receive money for a patent hive that he knows will not work, or that he has no "right" to receive money for; another takes $10. for a receipt for Fertilization etc., promising to refund the money if it don't work, which he never does; a third receives $2.00 for a wonderful receipt for an "Ambrosial" promising too, to refund money, but never does; and still another class receives money for Queens etc., that they can't furnish, and after *two years* time write to our much abused, and patient friend, telling him times are so hard they *can't send* the money back, won't he take some wares, etc.; what is to be done?

We submit the question to our patrons, shall we receive advertisements from such? We are well aware this class of advertisers are quite profitable, and we might *almost* excuse an Editor for turning about and concluding patent hives are not so very bad after all, even had they loudly denounced them, before occupying the chair, "Editorial."

Our Wares.

We shall at all times take the liberty of carefully scrutinizing the prices asked for whatever is advertised in the way of implements, and if we deem the prices asked exorbitant, shall in default of a better way offer them ourselves at what we consider a fair margin.

Recognizing the fact that the good of our readers, (they being by far the larger number,) should always be considered before that of our Advertising patrons, we have not hesitated to offer for sale anything whereby we thought their welfare might be promoted. In putting the dollar hive in the market we expected to incur the abuse of those having hives for sale at prices ranging from 5 to $10, and we were not disappointed. Now it has been suggested that some of these things have been offered at less than cost, to "spite" certain individuals; aside from having no time for any such folly, we have, ever since the days of the "hen business" had a strong Yankee propensity, for making every thing pay *some* profit at least, and our readers may rest assured that when we offer the present number, at the rate of 4c. per copy, in clubs, it probably did not cost over 3½; that the Wax Ext'r offered elsewhere, at $3.00 did not cost over 2.50 all crated; Simplicity hive, 75c. etc., but permit us tosay that to secure these results, *real work* of brain as well as hand is needed. If the $1. Queens cannot be reared at a profit we believe it will be our first defeat; a series of papers on the subject will be commenced in our next. The details of our experiments with artificial heat, will be found in Sept. and Oct. No's of last year.

Names of responsible parties will be inserted in either of the following departments, at a uniform price of 10c. each insertion, or $1.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge.

Those whose names appear below, agree to furnish Italian Queens the coming season for $1.00 each, under the following conditions; No guarantee is to be assumed of purity, safe delivery or any thing of the kind, only that the Queen be reared from a choice, pure mother. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best Queens, put up neatest and most securely, will probably receive the most orders. Special rates for warranted and tested Queens, furnished on application to any of the parties.

J. Shaw & Son, Chatham center, Medina Co., Ohio.
I. E. Daniels, Lodi, " " "
G. W. Dean, River Styx, " " "
E. C. Blakeslee, Medina, " " "
Willis J. Phelps, " " " "
W. J. Hosmer, Janesville, Minnesota.
James A. Buchanan, Wintersville, Jeff. Co., O.
Dr. J. P. H. Brown, Augusta, Georgia.
Miss. Annie Saunders, Woodville, Miss.
W. J. Standefer, Dry Grove, Hinds Co., Miss.
W. D. Wright, Knowersville, Albany Co., N. Y.
J. H. Nellis, Canajoharie, Montgomery Co., N. Y.
R. S. Becktell, New Buffalo, Mich.
C. R. Williams, Milan, Erie Co., O.

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

Geo. T. Wheeler, Mexico, N. Y.
R. S. Becktell, New Buffalo, Mich.
Kruschke Bro's, Berlin, Wis.

Business & Personal.

H. E. Curry, 208 W. Fourth St. Cin. O., will pay a liberal price for some empty combs.

In order to hasten the introduction of the STANDARD

Apiarian Implements, we make the following offer. Standard Hive, including bottom-board, door-step, Blocks' and all the stand that we think is needed to keep it from the ground.....$2.00
Twenty frames for above 5¾ c. each.....1.15
Quilt..... 40
Or all complete except painting, for.....3.50
The same in a bundle including nails, hinges etc, 3.25
Extractor made expressly for Standard frames, (will take Gallup frames also).....$9.00
Any deviation from above, be it only 1-16 of an inch, will be only at our regular list prices.
Diagrams and directions for making above hive will be given in our next No.

A. I. ROOT & CO., Medina, Ohio.

We always consider it an especial favor to hive customers inform us by postal card whether goods are satisfactory; whether our mode of packing is efficient; time taken in transit; whether Express or Freight charges were reasonable, etc. etc.

Respectfully, A. I. Root & Co.

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line, Nonpariel space, each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

MUTH'S ADVERTISEMENT.

HONEY JARS.

One pound (square) Jars, per gross,	$6.50
Two " " " "	8.50
Corks, "	.75
Tin Foil Caps, "	1.20
One and Two Pound Labels, per gross,	.75
The same with address printed to order, per 1000,	5.00
1 qt. Self-Sealing Mason's Fruit Jars, per gross,	19.00
Labels for above, " "	.65
The same with printed address, per 1000	4.25

CHOICE NEW ALSIKE CLOVER SEED.

One bushel (60 lbs.)	at	$20.00
½ "	"	10.00
¼ "	"	5.00
One pound,	"	.50

Has arrived and is for sale. Also

Langstroth's Bee Hives, Bee Veils, Uncapping Knives, &c., I offer at lowest possible prices.

Straw Mats,—to fit the top of Langstroth's hive—the manufacture of M. Nevin's, Cheviot, Hamilton Co., O., and well made, at $4.50 per doz.

For further particulars, Address,

CHAS. F. MUTH,
1tf Cincinnati, O.

SALE OF 400 COLONIES OF ITALIAN HONEY BEES.

Having accepted the office of cashier of the Farmers & Merchants Bank of Jefferson, which was lately organized in this place, I will be unable to care for all the 850 stocks of honey-bees I have now on hand; I will therefore sell 400 of them. These bees are all pure Italians, and will be sold as follows:

Single colonies,		$13.00
10—20	" per colony,	12.00
20—50	" or more "	11.50

These bees will be delivered free of charges at the express station in Jefferson, and safe arrival at the nearest express station of the purchaser guaranteed.

All these stocks of bees are in an 8 frame Langstroth movable comb hive, are in good condition and have honey enough to last them to May 15th, or longer.

Terms cash in advance.

ADAM GRIMM,
2t4 Jan. 20th, 1874. Jefferson, Wis.

AMERICAN BEE JOURNAL.

Every Bee-Keeper should subscribe for this Monthly. It is the **oldest and best** scientific and practical Journal of Apiculture in the World. The most successful and experienced Apiarians in this country and Europe contribute to its pages. Terms, $2.00 a year in advance. **Send a Stamp for a Sample Copy.** Address, THOMAS G. NEWMAN, Room 27, Tribune Building, Chicago

DISSOLUTION AND REMOVAL.

The firm of BALDWIN BROS. is dissolved by mutual consent, the same to date from Nov. 1st, 1873.

L. W. BALDWIN,
A. A. BALDWIN,
P. BALDWIN.

The subscriber, having removed to Missouri, will continue to breed choice Italian Bees and Queens from the best stock that can be procured. Purity and safe arrival guaranteed. No circulars.

Prices:—Single Tested Queens, $3; Two for $5. Six or more, $2 each. Address L. W. BALDWIN, Wellsville, Montgomery Co., Mo.

DO **TRY IT 3 Months for 10 Cents;** or with $3 Chromo for 50 cents; or 6 months with "The Flowers of Paradise," a first-class $6 Chromo, 15½x21 inches, for $1. The National Agriculturist and Bee Journal is a 16-page paper of 64 columns, handsomely illustrated in all its departments. One of the best *Agricultural* and *Family* papers published. Only $1 per year, or $1.25 with best Bee-Book, or **$1.50** with a beautiful Chromo. Bee-Keeper's Magazine, a 32-page monthly, same terms, or both for **$1.75.** Send now for samples, and **Liberal Terms to Agents free.** H. A. KING & Co., 14 Murray St., N. Y. 1w2

TESTED ITALIAN QUEENS—Sent by mail $3.00 each.

Nucleus Hives, untested Queen, bees and all sent by express for $3.00. Queens bred from pure mothers warranted fertile, with no other guarantee, sent by mail $1.00.

Orders will be filled strictly in rotation.

Address J. SHAW & SON, Chatham Center,
3tf or I. E. DANIELS, Lodi, Medina Co., O.

EGGS FOR HATCHING—White Leghorns from J. B. Smith's stock, exclusively. Lt. and Dk. Brahmas from Todd Herstine and T. William's prize taking strains. Also, Italian Queens at $1.00 each.

Address
3t5 J. A. BUCHANAN, Wintersville, Jeff. Co., O.

BEE-KEEPERS, ATTENTION!—Send 25cts. for three months' subscription to NATIONAL BEE JOURNAL, now published and edited by

ELLEN S. TUPPER, Des Moines, Iowa.

Liberal terms to Agents. Specimen number free.

ITALIAN BEES.

ITALIAN QUEENS bred from imported mothers—a month earlier than in the North. Purity and safe arrival guaranteed. Address

DR. J. P. H. BROWN, Augusta, Ga.

ASHLAND POULTRY YARDS.

FRESH eggs for hatching:—From eight different varieties of pure-bred poultry. Send for price list. E. J. WORST, Ashland, Ohio. 4t5

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